

Researches on Crustacea, No. 16
Carcinological Society of Japan
Odawara Carcinological Museum
Azabu-Juban 3-11, Minatoku, Tokyo
(Issued—July 30, 1987)

A NEW RECENTS GENU AND SPECIES OF NOTODROMADINID OSTRACOD FROM INDIA

With 19 Text-figures and 1 Plate

by

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インドで発見されたカイミジソコ類の新属新種について

図 19, 図版 1

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Abstract: A new recent ostracod genus *Gurayacypris* belonging to subfamily Notodromadinae KAUFMANN 1900 with *G. kangraensis* sp. nov. as its type species is described from a pond near Kangra, Himachal Pradesh, India. The paper records the family Notodromadiidae KAUFMANN for the first time from India.

Introduction

In one of the collections made from the northern hilly states of India; Jammu and Kashmir and Himachal Pradesh the author came across a taxon which apparently resembled genus *Notodromas* LILLJEBORG. The sample was collected from an oval water body located at the road side of Kangra-Hoshiarpur road about 2 Km from the village Mankhandi having water expanse of about 100 m² and depth of about 15 cm. Only seven specimens: five males and two females were present in the sample. Since *Notodromas* has never been reported from India, the specimens were examined in detail and it was found that these cannot be assigned to any known taxa hence a new genus *Gurayacypris* has been erected and *G. kangraensis* sp. nov. as its type species is described in this paper.

The subfamily Notodromadinae KAUFMANN 1900 although hitherto unknown from

India yet has been reported from some parts of Asia, America, Europe, and Australia. The type genus of this subfamily i.e., *Notodromas* LILLJEBORG is represented by three species in Asia viz. *N. persica* GURNEY, *N. oculata* SARS and *N. entizi* DADAY.

DEDECKKER (1979) while suggesting the separation of notodromadinid ostracods from the family Cyprididae Baird into a separate family Notodromadidae KAUFMANN embracing three subfamilies, namely Notodromadinae, Centrocypridinae and Cyproidinae enlists three genera under the first named subfamily: *Notodromas* LILLJEBORG, *Newnhamia* King and *Kennethia* DEDECKKER. The inclusion of the present new genus i.e., *Gurayacypris* would raise the number of genera to four under subfamily Notodromadinae.

*Gurayacypris*¹⁾ gen. nov.

Type Specis. *Gurayacypris kangraensis* sp. nov.

Diagnosis.—Subovate with narrow ends, in dorsal view, subreniform, in side view, with flat ventrum, anteroventral area serrated; inner lamella like other notodromadinid genera but line of conrescence scalloped; eye tubercle not prominent. The maxillary endopodites in male very unequal, left spatulate, right sickle shaped.

Remarks.—DEDECKKER (1979) while investigating in detail structure of carapace and soft parts of different notodromadinid taxa stressed the importance, for the generic distinction, of eye tubercle, fine details of the shell (including inner lamella) and the shape of male's prehensile palps of maxilla. The new genus *Gurayacypris* differs from the other known genera in shell as well as soft parts hence can easily be distinguished. However, of all other known genera under the subfamily Notodromadinae, namely *Notodromas* LILLJEBORG, *Newnhamia* KING and *Kennethia* DEDECKKER it resembles the most with the first named genus. Nevertheless its scalloped line of conrescence and spatulate left prehensile palp make it a distinct genus.

Description

*Gurayacypris kangraensis*²⁾ sp. nov.

(Figs. 1-19, pl. VII, figs. 1-4)

Repository: The type material at present is housed in the Museum, Department of Zoology, Punjab Agricultural University, Ludhiana, India. However, after publication of this paper, holotype will be deposited in the Museum, Zoological Survey, India, Calcutta.

¹⁾ The new genus is dedicated to Professor S.S. Guraya, DEAN, College of Basic Sciences and Humanities, Punjab Agricultural University, Ludhiana. He is a distinguished Zoologist. The new genus is named after him and the well known Ostracod genus *Cypris*.

²⁾ From the town Kangra in Himachal Pradesh.

Type locality: The type material, five males and two females were collected by the author on 23.9.1985 from a permanent oval body of water having water expanse of about 100 M² and located at about 2 KM from village Mankhandi at Kangra-Hoshiarpur road.

Measurements: Holotype ♂ Slide no. 0-154M1, whole amount in D.P.X., Width=0.398 mm, Length=0.76 mm, Height=0.46 mm. Paratype ♂♂ slide nos 0-106M2, 0-106Ma, 0-106Mb and 0-106Mc. Dissected in D.P.X. and Farrant's medium.

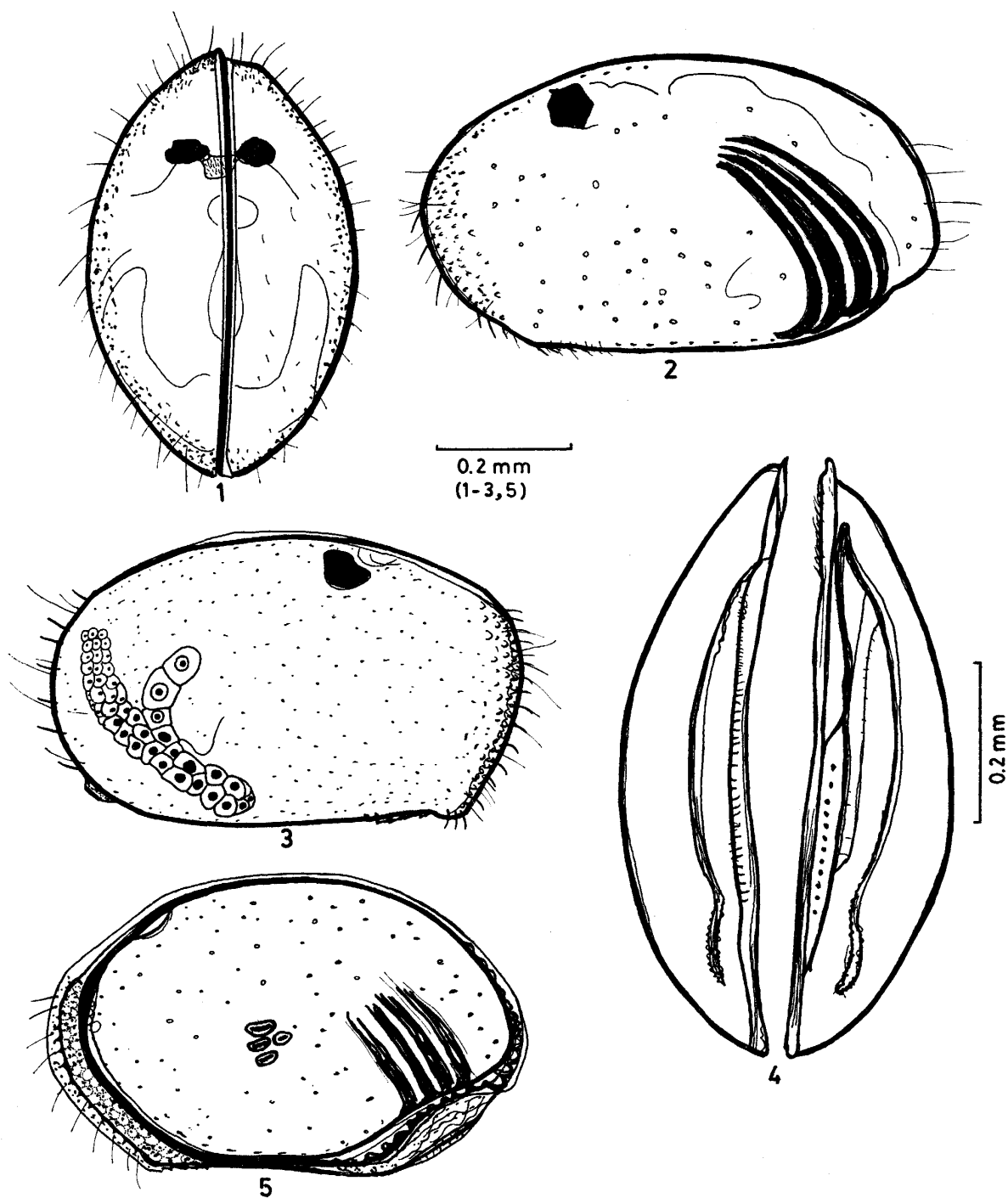
Width=0.391-0.398 mm,
Left valve length=0.74-0.76 mm,
Height=0.46-0.49 mm,
Right valve length=0.75-0.76 mm,
Height=0.47-0.49 mm,
Paratype ♀ slide No. 0-106 Fa Dissected in Farrant's medium
Width=0.39 mm,
Length=0.70 mm,
Height=0.45 mm,

Diagnosis: Subovate with narrow ends, in dorsal view, subreniform in side view, ventrum flat with serrations at anteroventral margin; height 3/5 ths of length and slightly exceeding width; line of concrescence scalloped; clasping palps of maxilla in male very unequal, left spatulate, right sickle shaped; furcal ramii much compressed laterally.

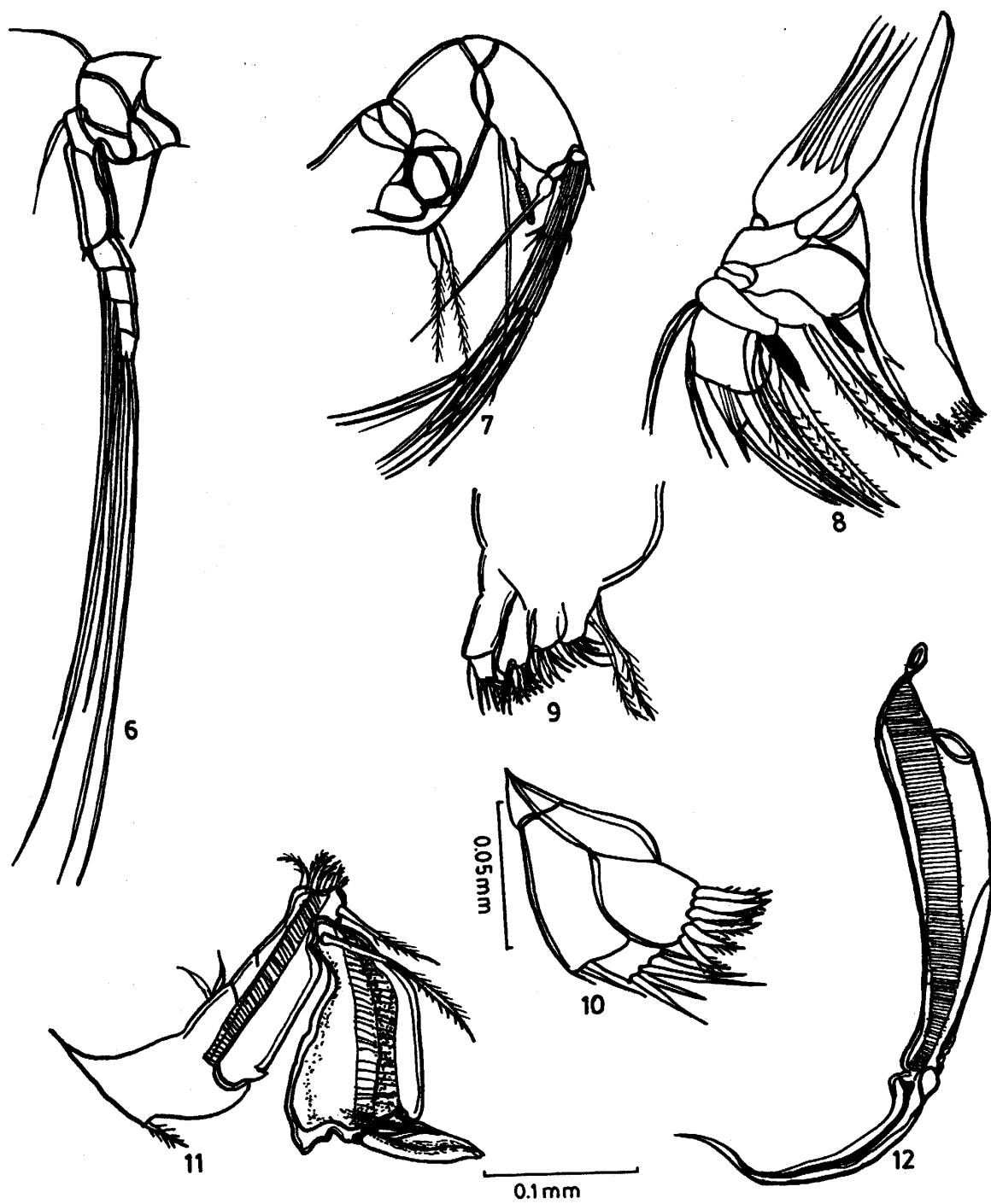
Male Carapace subreniform (fig. 2) greatest height equal to 3/5 ths of length and lies in middle, dorsum broadly arched, anterior margin broadly rounded, anteroventral margin with serrations, ventral margin straight for 2/3rds of its length, bending obliquely upwards thereafter, subovate in dorsal view (fig. 1), eye tubercle not prominent, venter with conspicuous elevated, arcuate ridges, one at each valve (fig. 4) enclosing flattened area having faint ridges and grooves running longitudinally parallel to contact margin of valve; valves subequal, right valve slightly exceeding in height; valves with faint markings all over, anterior and posterior extremities of valves with fine tubercles and bristles; normal pores uniformly distributed on valves; muscle scars four, anterior three elongated, arranged in vertical row having rounded scar behind.

Inner lamella-broad, more so anteriorly, line of concrescence scalloped; in left valve at anterior and posterior ventral margins (pl. VII, fig. 1) and in right valve at posterior ventral margin only (fig. 5, pl. VII, fig. 2).

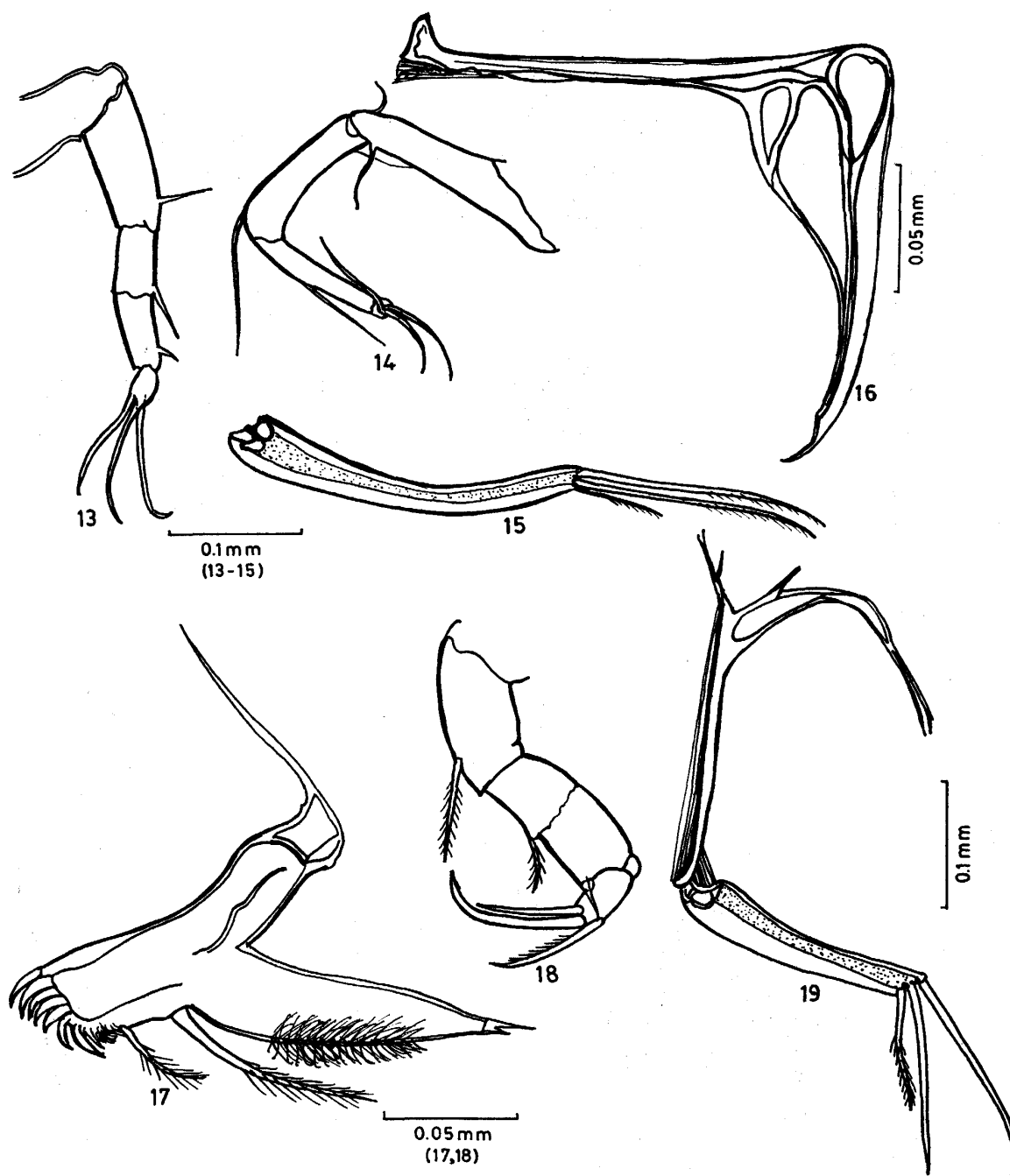
Soft parts-Antennule (fig. 6) length ratio of 3rd to 7th segments in distal direction of 320:100:125:120:100. Antenna (fig. 7) with 5 long and 1 small natatory setae reaching beyond the tips of claws, sense club swollen at the distal end, a bristle at-



Figs. 1-5.



Figs. 6-12.



Figs. 1-19. Pl. VII Figs. 1-4 *Gurayacypris kangraensis* gen. nov. sp. nov. Figs. 1, 2, 4-16, Pl. I Figs. 1-4 of male. Figs. 3, 17-19 of female.
 Fig. 1. Dorsal view, Fig. 2 Lateral view left side Fig. 3 Lateral view, right side, Fig. 4. Valves, ventral view, Fig. 5 Right valve, inner view. Fig. 6 Antennule, Fig. 7 Antenna, Fig. 8 Mandible α , β & r bristles dark, Fig. 9 Maxillula, palp and masticatory process, Fig. 10 Maxillula, palp and inner masticatory process with six Zahnborsten, Fig. 11 Left maxilla, Fig. 12 Right maxillary palp, Fig. 13 First thoracic leg, Fig. 14 Second thoracic leg, Fig. 15 Furca, Fig. 16 Furcal attachment, Fig. 17 Maxilla, Fig. 18 First thoracic leg, Fig. 19 Furca and furcal support.

tached to ventrodistal end of 1st segment, globular at base reaching distal end of 4th segment.

Mandible (fig. 8) with six molar teeth decreasing in size posteriorly, 2nd to 5th bifid, 6th smaller and thinner, with 2 long spines between 1st and 2nd molars, mandibular palp stoutly built, protopodite broad bearing exopodite plate with 5 pilose setae, three endite segments clearly distinguishable having length ratio of 10:20:18, second segment broad, semicircular on inner side; α , β and γ bristles as drawn (fig. 8).

Maxillula (figs. 9, 10) palp short, outer masticatory process with Zahnborsten bearing faint bristles; inner masticatory process with two long bristles; maxillary plate with 22 strahlen.

Maxilla (figs. 11, 12) maxillary endopodite transformed into chitinous grasping apparatus (palps), left and right palps differing in shape, left spatulate (fig. 11) and right (fig. 12) sickle shaped.

First thoracic leg (fig. 13) distal four segments having length ratio in distal direction of 36:20:20:10, terminal segment bearing 3 claws, longest claw exceeding length of two distal segments.

Second leg (fig. 14) distal four segments having length ratio in distal direction of 90:76:58:10, terminal segment bearing three almost equal claws.

Penis (plate VII, fig. 4) of two hemipenes joining at bases, each hemipenis with a proximal large shield and distal small shield, outer margin of proximal shield circular, distal shield having two circular lobes, one at lateral side and other at posterior end; Vasa deferentia traversing through the hemipenes in the form of complicated labyrinthine sleeves.

Ejaculatory tube (pl. VII fig. 3) bearing numerous rosette of spines covered with sheath, having length-breadth ratio of 2:1. Furca (fig. 15) pediform but weakly chitinised much compressed laterally so as to become leaf like, bearing three claws at distal end, two of almost equal length, third short, claws having length ratio of 20:55:56.

Furcal attachment (fig. 16) resembles the details as given by ROME (1969).

Female slightly smaller than male, carapace profile with protuberance at postero-ventral margin (fig. 3). Soft parts like those of male except maxilla and first thoracic leg. Maxilla (fig. 17) lacking the grasping apparatus, masticatory apparatus with 7 prominent and curved bristles; endopodite with two small and unequal bristles.

First thoracic leg (fig. 18) having length ratio in distal direction of 22:12:15:10, distal segment bearing two unequal claw and pilose bristles.

Remarks: *Gurayacypris kangraensis* sp. nov. can easily be distinguished from the other known species under subfamily Notodromadinae as its valves possess scalloped line of concrescence. The copulatory palps in male of this species also differ from other species, the left being spatulate and right sickle shaped. The caudal furca in

G. kangransis is pediform but weakly chitinized. The furca is laterally compressed unlike other species.

Acknowledgement

The author is thankful to the University Grants Commission, New Delhi for providing him the financial assistance for running a major research project on the crustaceans of India.

References

- DEDECKKER, P., 1978. Comparative morphology and review of Australian Notodromadinae Kaufmann 1900. *Senckenbergiana biol.* 59(5/6): 417-463.
- ROME, D.R., 1969. Morphologic de lattache de la furca chezles Cyprididae et son utilisation en systematique. In: NEALE, J.W. (ed.) *The Taxonomy, Morphology and Ecology of Recent Ostracoda*: 168-193 Oliver and Boyd.

要 約

カイミジンコ類 (Ostracoda) に属する新属新種 *Gurayacypris kangraensis* (Notodromadinae) について記載した。本種は淡水産であって、インドの Kangra, Himachal Pradesh 地方の池から発見された。Notodromadiidae の種としてはインドでは最初の記録である。

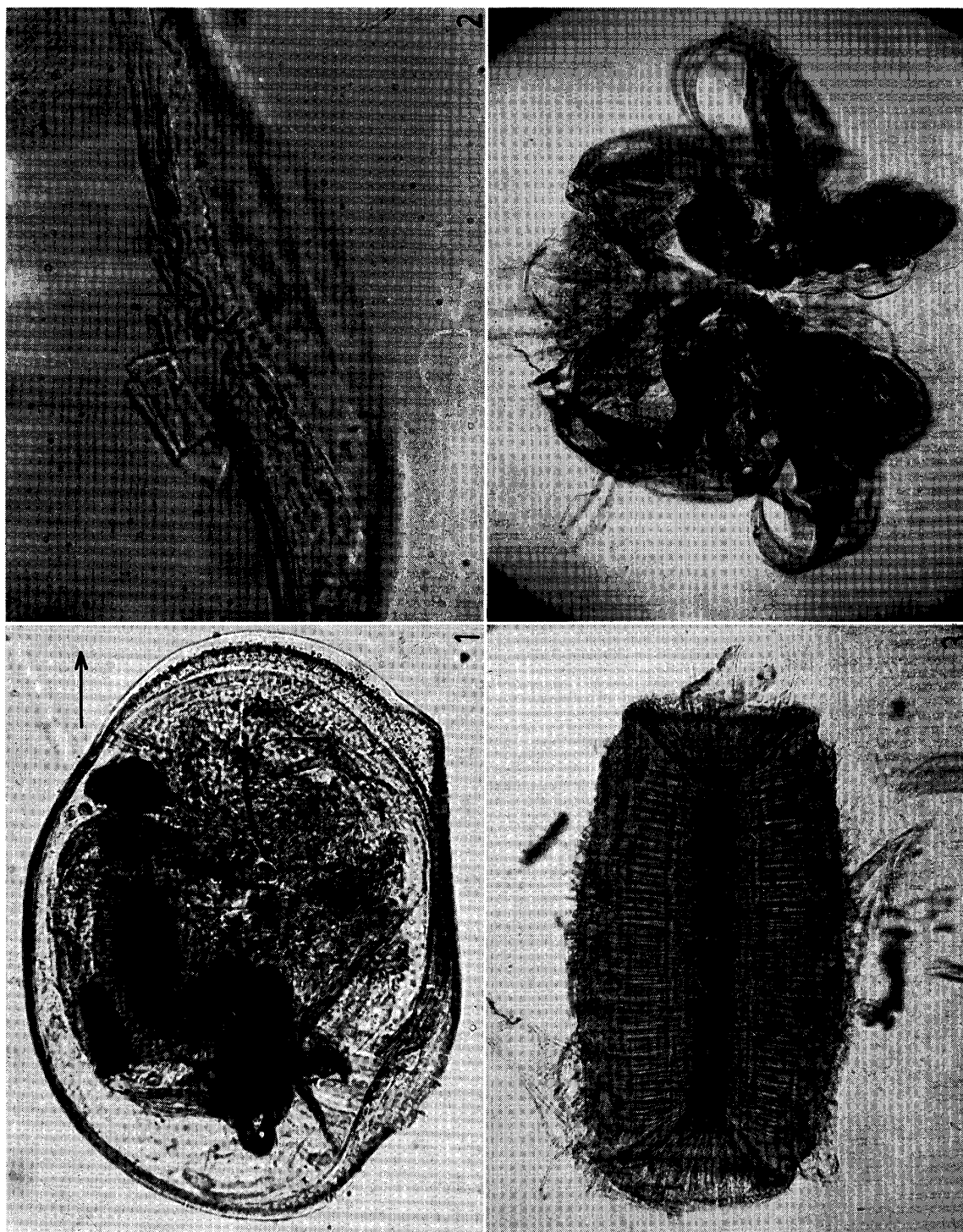


Plate I. *Gurayacypris kangraensis* gen. nov., sp. nov. male Fig. 1 Left valve and soft parts $\times 345$, Fig. 2 Right valve, posteroventral margin (slightly broken) $\times 800$, Fig. 3 Zenker's Organ (ejeculatory tubes) $\times 600$, Fig. 4 Penis $\times 680$.